

Figure 2 King and Jeffries, PH-7171

Nucleotide Sequence of pMJ050

SEQ ID NO:17 is nucleic acids 1-5860
SEQ ID NO:18 is nucleic acids 1-2771
SEQ ID NO:19 is nucleic acids 1-2674
SEQ ID NO:20 is nucleic acids 348-2674

SV40 promoter sequence

cccatteteegeeeccatggetgactaatttttttttttatttatgeagaggeegaggeegeetetgagetatteeagaagtagtgaggaggettttttggaaggeetaggettttg I... ggateegetgtggaatgtgteagttagggtgtggaaagteeceaggeteeceageaggeagaagtatgeaaagatgeateeaattagteageaaceaggtgtggaa agtececa ggetececa geaggeagaagtat geaaageat geatetea attagtea geaacea tagtee geecetaa ete egeece attee geece a aaaa...347

3'UTR sequence (antisense)

348...agettaeatgatetgeagaggeeagtateageaetetetgeagteatgeggeteaeggaeettteaeagetageegggetaagaggetaagatggageeaeeat Numbers before and after each individual sequence refers to the base number in plasmid, pMJ050. To assemble the nucleotide sequence of pMJ050 as a whole, each individual sequence can be ordered numerically, starting with the SV40 promoter sequence.

FIGURE 3B

Luciferase sequence (antisense)

627...aacggcgatettteegeeettettggeetttatgaggatetetetgatttttettgegtegagtttteeggtaagaeettteggtaettegteeaeaaeaeaaeteeteege gaacggacatttcgaagtactcagcgtaagtgatgtccacctcgatatgtgcatctgtaaaagcaattgttccaggaaccagggcgtatctcttcatagccttatgcagttgctc ccagcagcgcactttgaatcttgtaatcctgaaggctcctcagaaacagctcttcttcaaatctatacattaagacgactcgaaatccacatatcaaatatccgagtgtagtaa ctccgataaataacgcgcccaacagcataaagaattgaagagttttcactgcatacgacgattctgtgatttgtattcagcccatatcgtttcatagcttctgccaacc iccccgacticcttagagaggggagcgccaccagaagcaatticgigiaaattagataaatcgtattigtcaatcagagtgcttitggcgaagaaggagaatagggttggca iatgaggcagacacctttaggcagaccagtagatccagaggggttcatgatcaggcaattgtcttgtccctatcgaaggactctggcacaaaaatcgtattcattaaa caaaattttttgcaacccctttttggaaacgaacaccacggtaggctgcgaaatgcccatactgttgagcaattcacgttcattataaatgtcgttcgcgggcgcaactgcaa cgaccgcgcccggtttatcatccccctcgggtgtaatcagaatagctgatgtagtctcagtgagcccatatccttgcctgatacctggcagatggaacctcttggcaaccgct accggacataatcataggacetefeacacacagttegectetttgattaaegeecegtttteeeggtateeagateeacaaeettegetteaaaaaatggaacaaetttae accgggaggtagatgagatgtgacgaacgtgtacatcgactgaaatccctggtaatccgttttagaatccatgataataattttttggatgattgggagcttttttgcacgtt cgtcgggaagacetgcgacacetgcgtcgaagatgttggggfgttggagcaagatggattccaattcagcgggagccacetgatagcetttgtacttaatcagagacttc iccageggttecatCttecageggatagaatggegeegggeetttetttatgtttttggegtettecatgggaegte...2284

5'UTR sequence (antisense)

ttggcaatteeggtgtaeteaceggtteegeagaceactatggeteteeegggaggggggggteetggaggetgeaegaeaeteataetaaegeeatggetagaegett 2285...ggttggtgttacgtttggtttttctttgaggtttaggattcgtgctcatgatgcacggtctacgagacctcccggggcactcgcaagcaccctatcaggcagta ccacaaggeetttegegacecaacactacteggetageagtettgegggggaacgeccaaatetecaggeattgagegggttatecaagaaaggaeeeggtegte ictgegtgaAgacagtagtteeteacaggggagtgatteatggtggagtgtegeeeceateagggggetgge...2674

Hepatitis delta virus ribozyme sequence (sense)

2675...ggccggcatggtcccagcctcctcgctggcgccggctgggcaacattccgaggggaccgtccctcggtaatggcgaatgggacccacaaaatctc...2771

FIGURE 3C

pMJ050 plasmid backbone sequence

egiggeegaaggageatgaecgaegeegaecaaeaeegeeggieegaeggeeggeeeaegggteeeagggggggggeggeeetegaaaetigtitatigeageitataaagg ggtgtggtccgggacgacgtgaccetgttcatcagcgccaggaccaggtggtgccggacaacaccctggcctgggtgtgggtgcgcggcctggacgagctgtacgccgagtggt cgatecageeteeggggaaeggtgeattggaaeggaeetgeaggaegtgttgaeaattaateateggeatagtatateggeatagtataataegaeteaetataggagggeea eggtttgaeteaeggggattteeaagteteeaeeeeattgaegteaigggagtttgttttggeaeeaaaateaaegggaettteeaaaatgtegtaaeaaeteegeeeat atgggcggtaggcgtgtacggtgggaggtctatataaagcagagctcgtttagtgaaccgtcagatcgcctggagacgccatccacgctgttttgacctccatagaagacaccgggac riggcattatgcccagtacatgaccttatgggactttcctacttggcagtacatctacgtattagtcatcgctattaccatggtgatgcggttttggcagtacatcaatgggcgtggatag acttteeattgaegteaatgggtggagtatttaeggtaaaetgeeeaettggeagtaeateaagtgtateatatgeeaagtaegeeeeteattgaegteaatgaeggtaaatggeeege ctagatetagagteegttaeataaettaeggtaaatggeeegeetggetgaeegeeeaaegaeeeeegteeattgaegteaataatgaegtatgtteeeatagtaaegeeaataggg aagggattttgccgatttcggcctattggttaaaaaatgagctgatttaacaaatatttaacggaattttaacaaaatattaacgtttacaatttccattcgccattcaggctgcaa itegeeggettteeeegteaagetetaaategggggeteeetttagggtteegatttagagetttaeggeaeetegaeegeaaaaaaettgatttgggtgatggtteaegtagtggg 2772...tagatacctaggtgagctctcggtacctcgagaattcgaacgcgtgatcagctgttctatagtgtcacctaaatagcttcgaggtcgacctcgaaacttgtttattgcagc ccategecetgatagaeggtttttegecetttgaegttggagtecaegttetttaatagtggaetettgttecaaaetggaacaacaeteaaeeetateteggtetattettttgattta ggggctggcttaactatgcggcatcagagcagattgtactgagagtgcaccatatgcggtgtgaaataccgcacagatgcgtaaggagaaaataccgcatcaggcgacgc gtetgaegeteagtggaaegaaaaeteaegttaagggattitggteatgaeattaaeetataaaaataggegtateaegaggeeetttegtetegeggtfteggtgatgaeg cettegggaagegtggegettteteaatgeteaegetgtaggtateteagtteggtgtaggtegttegeteeaagetgggetgtgtgeaegaaeeeeegtteageeegaee yetgegeettateeggtaaetategtettgagteeaaeeeggtaagaeaegaettategeeaetggeageageeetggtaaeaggattageagageggggfatgtagge taaaaggecagcaaaaggecaggaacegtaaaaaggeegegttgetggegttttteeataggeteegeeeeetgaegageateacaaaaaategaegeteaagteaga ggtggcgaaacccgacaggactataaagataccaggcgtttccccctggaagctccctcgtgcgctctcctgttccgaccctgccgcttaccggatacctgtccgcctttct ggtgetacagagttettgaagtggtggeetaactacggetacactagaaggacagtatttggtatetgegetetgetgaagecagttacetteggaaaaagagttggtage gateceteggagatetgggeceatgeggeeggategatgateacteaaaggeggtaataeggttatecacagaateaggggataacgeaggaaaagaacatgtgag ttataatggttacaaataaagcaatagcatcacaaatttcacaaataaagcattttttcactgcattctagttgtggtttgtccaaactcatcaatgtatcttatcatgtctg ${f aaagcaa}$ tagcatcacaaatttcacaaataaagcatttt ${f T}$ ttcactgcattctagttgtggtttgtccaaactcatcaatgtatcttatcatgtct... ${f 5860}$

FL9 ΑΙα ΑΙβ ΒΙα Β4α Β6α Β6β C4α D1α D1β D3α D3β D6α 1800000 atinU 160000 Total Integrated Luciferase 200000 2000000 Figure 4 King and Jeffries, PH-7171

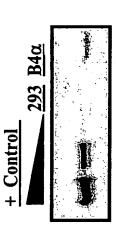
Clone Designation

Figure 5 King and Jeffries, PH-7171

A. NS3 (HCV Serine Protease/Helicase)

± Cont. 293 B4α

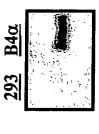
B. NS5B (HCV RDRP)

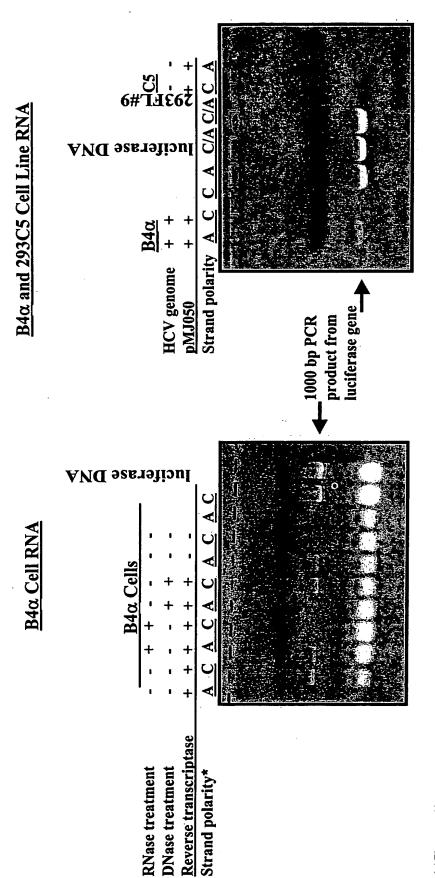


D. Firefly Luciferase









*(C) = coding sequence of luciferase gene,

⁽A) = antisense sequence of luciferase gene,

⁽C/A) = single tube RT-PCR; does not differentiate between coding and non-coding strand.